

EXHIBIT A

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EMPLOYEE INVENTION DISCLOSURE

AHT

The invention herein described was evolved during the course of my employment and is being submitted in pursuance of the terms of the Cubic Invention Agreement.

1. TITLE OF INVENTION: REMOTE CONTROL OF AIRCRAFT USING DATALINK AND EXISTING AUTOPILOT
2. PURPOSE OF INVENTION: TO THWART HIJACKER ABILITIES TO USE AIRCRAFT AS A WEAPON BY DISABLING MANUAL CONTROL TRIGGERED BY PILOT OR GROUND STATION ACTIONS - PLANE CAN BE RETURNED TO GROUND BY REPROGRAMMING AUTO PILOT REMOTELY
3. CONCEPTION:

Invention conceived on _____

This disclosure written on _____
4. REDUCTION TO PRACTICE, IF any:

Construction of device started on _____, 19____

Device completed on _____, 19____

Device tested on _____, 19____
5. BRIEF DESCRIPTION: DATA LINK AND ASSOCIATED ELECTRONICS INSTALLED AND ENABLED TO DISCONNECT COCKPIT CONTROL AND ALLOW CONTROL BY OFFICIALS AT STRATEGIC LOCATIONS TO REPROGRAM AUTO PILOT AND LAND AIRCRAFT PER GROUND INSTRUCTIONS

Incorporated herein and forming a part of this disclosure are the following:
 Additional Sheets 1 Papers _____ Photographs _____ Prints _____
6. Indicate whether invention conceived or reduced to practice under:

(a) Government or other contract NO, or

(b) Company funded NO.
7. Indicate whether there is any software incorporated in this device which can be copyrighted. UNKNOWN AT THIS TIME
8. SIGN FULL NAME(s) Raylan H. Nelson

 Inventor

 Inventor

 Inventor

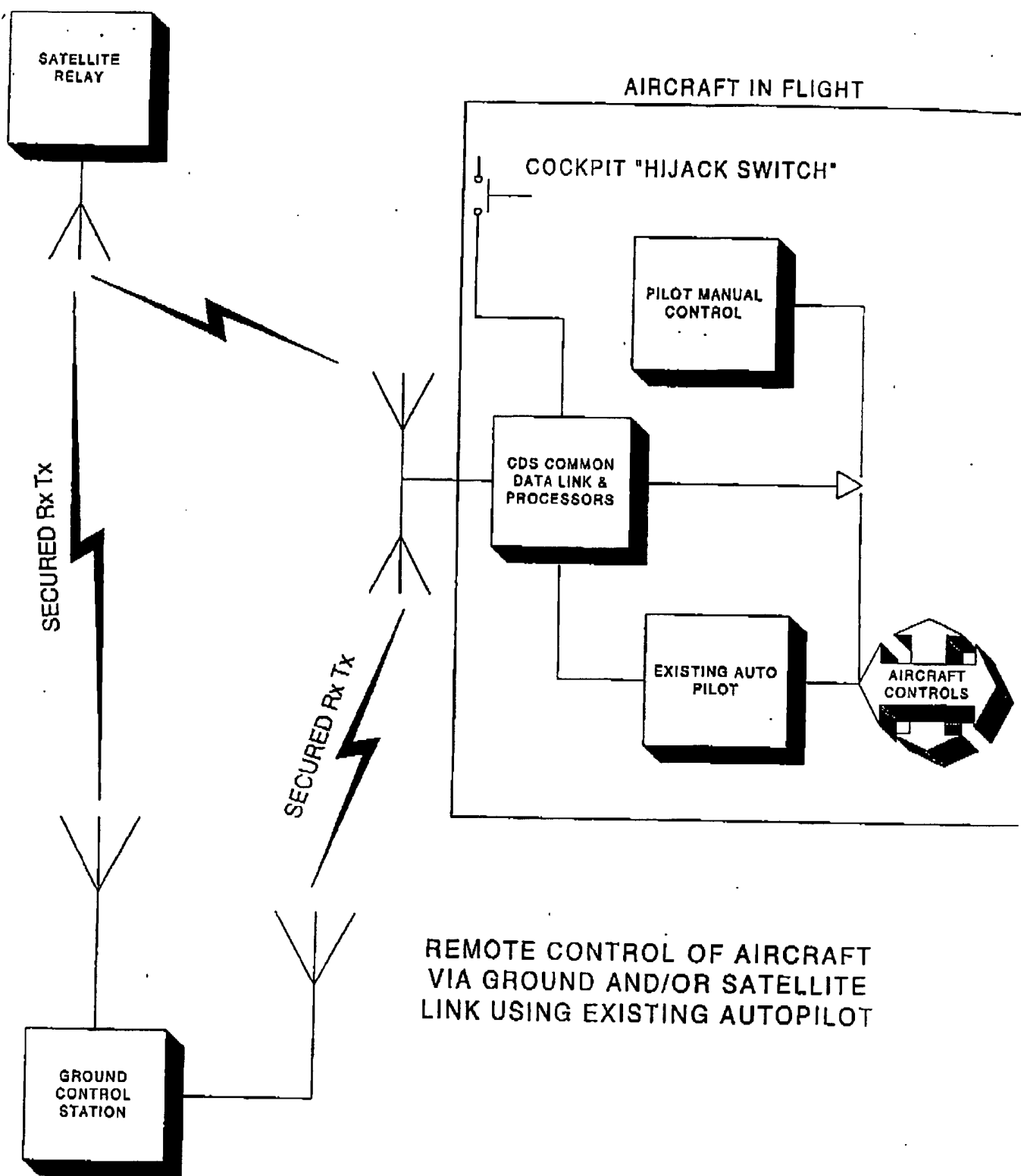
9. WITNESSES:

The invention was disclosed to me by the above inventor(s):
 The description was examined and is clearly understood.

Robert J. Wilson
 Signature of Witness

Date

John M. McMillan
 Signature of Witness



REMOTE CONTROL OF AIRCRAFT
VIA GROUND AND/OR SATELLITE
LINK USING EXISTING AUTOPILOT

Douglas G. Nelson

DOUGLAS G. NELSON

LEGAL

**Supplemental Attachment to Invention Disclosure Form CF 7-94B
"Remote Control of Aircraft Using Data Link and Existing Autopilot"**

Based on current events it is apparent that hijacked civilian aircraft can be a formidable weapon and can be commandeered with crude weapons or possibly no weapons at all. There are few or no effective defensive measures available to deter or inhibit the terrorist from achieving their objective once the craft is airborne and the terrorist have assumed control. My invention concept proposes to enable officials to take flight control of a hijacked aircraft from a secure location on the ground.

The primary obstacles to effectively implement a system such as proposed are likely not technological, but political, psychological, and situational.

The following assumptions should be considered,

Current aircraft have the ability to land in many airports without human intervention using the autopilot.

Many options may be available to minimize casualties to passengers and crew should such a system be well thought out and implemented.

These could include methods to put everyone on board into an unconscious state to avoid threats and killing aboard the craft while it is being returned to safety.

Radio communication with the ground could automatically be disabled to avoid psychological and hostage threats relayed to ground controllers. (The hard line approach to avoid more loss of life such as occurred on)

The possibility of unauthorized personnel assuming control of the aircraft from the ground by utilizing the same system or developing their own control center could be minimized or eliminated by specialized encryption, frequency modification techniques, classified access to sensitive information, restricted access facilities, and other schemes and security measures CDS personnel are experienced with.

Use of such a system could be mandated, and all aircraft with autopilot control could be required to be outfitted with such a system to be allowed into US airspace.

Key trained personnel could be located at all major airports. Ground stations in adjacent areas could serve as redundant stations backing up one another should there be a mishap in the station currently controlling a situation.

Aircraft could be fitted with redundant data link/processor systems to meet FAA requirements.

The cost can be justified by the comparative analysis of the cost of life, property, and economic cost resulting from the events of , and the potential for future well organized or copy-cat scenarios. The psychological benefits for our citizens could be priceless.

**Supplemental Attachment to Invention Disclosure Form CF 7-94B
"Remote Control of Aircraft Using Data Link and Existing Autopilot"**

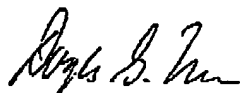
There is the possibility of using currently installed antennas, GPS, communication devices; and other on board equipment which may further minimize the time and impact of retrofitting such a system

Automated routines could be preprogrammed to limit the autopilot options to circling, and then flying and landing at key destinations, such as military airstrips, further limiting civilian populations from exposure to risk.

Warnings could be posted or published which inform all passengers that the consequences for stealing an aircraft will be a return flight to an unfriendly reception.

Such a system could also serve as a safety device for other emergencies such as cabin depressurization, pilot death, etc.

CDS past experience involving secure data links, and the technical abilities of the current staff should uniquely qualify this company to engage in the research, prototyping, testing and implementation of such a system. Cooperative interaction with aircraft manufactures, National Security Agency, and all other government and private interests could result in a fast development, test, and implementation cycle. The motivation will be obvious to all parties.



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